ABSTACT OF THE DISCLOSURE

The invention relates to a thrombolytic enzyme referred to as Thrombinase having a molecular weight of 31,000 to 32,000. Such a thrombolytic enzyme can be used for dissolving blood clots. The process comprises culturing a filtrate of Bacillus sphaericus sero type H5a 5b, removing the cell, subjecting the cell supernatant to filtration, salting out the retentate, subjecting the precipitate to dialysis, reprecipitating the precipitate and then reconstituting in buffer and finally decolourizing, purifying and dialyzing.